(BSP September 27, 2004)

Pin Bearing

Unless other materials are specified in the Plans, pin bearing assembly components shall conform to the following requirements for those components shown and specified in the Plans:

Steel Plates and Bars

Steel plates and bars (base plate, bearing plate, sole plate, and guide bar) shall conform to ASTM A 36, and the dimensions shall comply with the details as shown in the Plans. The surface of pin bearing assembly steel components in contact with stainless steel and with the bearing block shall have an average surface roughness of 125 microinches or less. The surface within the recess of steel plates and bars retaining PTFE shall have an average surface roughness of 250 microinches or less. All other base plate, bearing plate, sole plate, and guide bar surfaces in contact with other pin bearing assembly components shall have an average surface roughness of 500 microinches or less.

Polytetrafluoroethylene (PTFE)

PTFE shall be 100 percent virgin PTFE, woven PTFE fabric, or dimpled PTFE conforming to Section 18.8.2 of the AASHTO LRFD Bridge Construction Specifications, 1st Edition and latest interims.

Stainless Steel

Stainless steel sheet shall conform to ASTM A 240 Type 304L. Stainless steel in contact with PTFE shall be polished to a Number 8 mirror finish.

Stainless steel countersunk screws shall be hexagon socket type conforming to ANSI B 18.3 and shall conform to ASTM F 593 Type 304L.

Silicone Grease

Silicone grease shall conform to Military Specification MIL-S-8660.

Bolts, Nuts and Washers

Bolts, nuts and washers shall conform to Section 9-06.5(3).

Anchor Bolt Assembly

Anchor bolts shall conform to ASTM F 1554 Grade 105, including supplemental requirements S2, S3, and S5. Nuts shall conform to AASHTO M 291 Grade DH. Washers shall conform to AASHTO M 293. Bars shall conform to ASTM A 36. Pipe shall conform to ASTM A 53 Grade B Type E or S, black.

Resin Filler

Resin filler shall conform to Section 6-02.2 as supplemented in these Special Provisions.

Bearing Blocks and Keeper Rings

Bearing block forgings shall conform to Section 9-06.11, including AASHTO M 102 Supplemental Requirement S4. The grade shall be Grade F. The bearing block forging surfaces in contact with other pin bearing assembly components shall have an average surface roughness of 125 microinches or less. All other bearing block forging surfaces shall have an average surface roughness of 500 microinches or less.

Keeper ring forgings shall conform to Section 9-06.11 and the grade shall be Grade H. All keeper ring surfaces shall have an average surface roughness of 125 microinches or less.

Pin Assembly

Pins shall conform to ASTM A 276, UNS Designation 21800. Nuts shall conform to AASHTO M 291 Grade DH. Nuts with a thread diameter equal to or less than six inches shall have a minimum Rockwell Hardness of HRc 24. Nuts with a thread diameter greater than six inches shall have a Rockwell Hardness between HRc 20 and HRc 30. Washers shall conform to ASTM A 572 Grade 50. Cotter pins shall be stainless steel. The pin surfaces in contact with the bearing blocks shall have an average surface roughness of 125 microinches or less.

Submittals of Acceptance Test Reports and Certificates

The Contractor shall submit the following production samples, and test reports and certificates, to the Engineer for review, testing, and approval:

1. Manufacturer's certificate of compliance for the PTFE, resin filler, and silicone grease, in accordance with Section 1-06.3.

2. A two inch by three inch by 1/8 inch sample of PTFE taken from the lot of production material.

3. Certified mill test reports for all steel and stainless steel materials incorporated in the bearings.

The Contractor shall not ship the bearings from the fabricator's facility until receiving the Engineer's written approval of all production samples, and test reports and certificates.